

Customer No.: 31561
Application No.: 10/605,807
Docket No.: 10932-US-PA

REMARKS

This is a full response to the Office Action mailed Sep. 19th, 2006, and further response to the outstanding Office Action dated Feb.13, 2007 for non-responsive amendment to the Office Action dated Sep. 19th, 2006. Claims 1-4 are pending and remained unchanged, as originally filed. Reconsideration and allowance of the application and presently pending claims 1-16 are respectfully requested.

Claim Rejections Under 35 U.S.C. 103(a)

The Office Action rejected claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter AAPA) in view of Yamazaki (US 2003/0146888).

In response to the rejections thereto, Applicants hereby otherwise traverse the rejections. As such, Applicants submits that claims 1-4 are novel and unobvious over AAPA and Yamazaki, or any of the other cited references, taken alone or in combination, and should be allowed.

With respect to claim 1, as originally filed, recites in parts:

A display unit of an active-matrix organic light emitting display, comprising:

...
a second transistor, having a gate for receiving said second signal, said
second transistor determining whether or not to conduct a power
source based on said second signal;

...
wherein said second transistor is a P-type transistor having a

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threshold voltage, and an absolute value of said threshold voltage of said second transistor is between 2V to 5V (Emphasis added)

Applicants submit that such a display unit is neither taught, suggested, nor disclosed by AAPA, Yamazaki, or any of the other cited reference, taken alone or in combination.

First of all, it has been held that "[I]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned" (MPEP §2141.01 (a)).

As taught in paragraph [0011], "[A]n object of the present invention is to provide a display unit of an AM-OLED to reduce the threshold voltage of the P-type LTPS-TFT and thus reduce the operational V_{gd}, so that the drain current supplied to the P-type LTPS-TFT can be stable for a longer period of time". As to that is taught by Yamazaki, "[T]he present invention is characterized in that switching between drive modes such as constant voltage drive and constant current drive is performed according to display contents to select a display mode suitable to display contents" (paragraph [0028]). Those of ordinary skill in the art should understand Yamazaki endeavored in switching between different drive modes, that is different from Applicants' endeavor, that concern mostly on stabilizing the drain current supplied to the P-type LTPS-TFT for a longer period of time.

Secondly, Applicants submit that there is no motivation for those of ordinary skill in the art to modify the AAPA with what is taught by Yamazaki. The Examiner contends

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that “[I]t would have been obvious to one of ordinary skill in the art at the time of the invention to have use P-type transistor with a threshold voltage of 2.5V to 3.5V as taught by Yamazaki in place of the second transistor as taught by the AAPA in order to allow for both constant voltage drive and constant current drive in an OLED display” (Page 3 of the current Office Action; Emphasis added). However, Applicants submitted that even the second transistor of the AAPA is replaced as have a threshold voltage having an absolute value in the range between 2V to 5V, the AAPA won’t achieve the advantage of allowing for both constant voltage drive and constant current drive in the OLED display. As such, barely modifying the threshold voltage of the second transistor is irrelevant of the object of Yamazaki. Accordingly, one of ordinary skill in the art won’t be motivated to barely modify the threshold voltage of the second transistor of the AAPA, rather than employing other elements of Yamazaki. Applicants submit that the motivation provided by the Examiner is in sufficient.

For at least the foregoing reasons, Applicants submit that Yamazaki is not suitable for a second reference to modify the AAPA, in order to arrive at the claimed invention, as set forth in claims 1 and 2. Claims 1 and 2 are thus submitted to be novel and unobvious over the AAPA, Yamazaki, or any of the other cited references, taken alone or in combination, and thus should be allowed.

Applicants submit that claims 2-4 depend on allowable independent claim 1, and thus should also be allowable.

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Furthermore, with respect to claim 2, as originally filed, recites "wherein the absolute value of said threshold voltage of said second transistor is between 2.5V to 3.5V".

As admitted by the Examiner, "the AAPA fails to teach that the absolute value of the threshold voltage of the second transistor is between 2V and 3.5V" (Page 3 of the current Office Action). The Examiner then cites Yamazaki as a second reference to modify AAPA.

Addressing claims 1 and 2, the Examiner alleges that "Yamazaki teaches that P-type transistors can be operated using a threshold voltage with an absolute value of 2.5V to 3.5V (Yamazaki, FIG. 6). Applicants respectfully disagree.

Applicants submit that the Examiner does not clearly indicate which item has been interpreted as reading on the threshold voltage. Applicants then have to rely on mostly on Applicants' own understanding about the corresponding part of the cited reference, i.e., Yamazaki's FIG. 6. As shown in FIG. 6 and the corresponding description context, i.e., [0093]-[0097], Yamazaki mentions 4 voltages having absolute values falling in the range of 2.5V to 3.5V.

1. Yamazaki teaches in paragraph [0093], "[W]hen the potential is set to -8V, potentials of the anodes for respective colors become 0V, -3V, and -2V, wherein -3V is in the claimed range. However, Applicants submit that none of the potentials of the anodes for respective colors is taught to be a threshold voltage of a P-type transistor by Yamazaki. As such,

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the -3V does not deem to anticipate the absolute value ranges, as set forth in claims 1, and 2.

2. Yamazaki teaches in paragraph [0095], "when a margin for ensuring an operating region of the TFT in a saturation region is set to about 2.5V, it is required that a gate potential of the OLED driving TFT connected with a red OLED is set to about +2.5V", wherein the 2.5V and +2.5V fall in the claimed range. However, neither the 2.5V, nor the +2.5V has been taught to be a threshold voltage, and since as taught thereafter "a source potential of the OLED driving TFT which drives the red OLED becomes about +9V", if any, the TFT has a threshold voltage having an absolute value at least no less than 9V, which is out of the claimed range.
3. Yamazaki teaches in paragraph [0096], the source potential is adjusted to +9V in red, the gate potential is given as + 5.17V in green and + 3.35V in blue so that potential setting is conducted", wherein the given gate potential + 3.35 is within the claimed range. However, such a gate potential is also not a threshold voltage, as required by claims 1 and 2.

Therefore, it is concluded that Yamazaki does not teach, disclose, or suggest "a second transistor having a threshold voltage, wherein the absolute value of the threshold voltage of said second transistor is between 2.5V to 3.5V" as set forth in claim 2, at all.

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Therefore, claim 2 is submitted to be novel and unobvious over the AAPA, Yamazaki, or any of the other cited references, taken alone or in combination, and thus should be allowed.

Claims 3 and 4 depend on allowable claim 1, and thus should also be allowable.

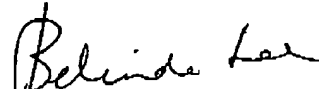
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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-4 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,


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